CLAIMS:

1.   A method of encoding an audio signal by representing at least part of said
audio signal by a plurality of sinusoids, the method comprising the steps of:
-          performing an analysis on a first segment of said audio signal;
-          selecting candidate sinusoids based on said analysis;
5   -   determining for at least one of the candidate sinusoids a phase consistency
defined by an extent to which a phase of said candidate sinusoid at a certain moment in time
can be predicted from a phase of said candidate sinusoid determined at another moment in
time; and
-          selecting said candidate sinusoid as a selected sinusoid when its phase
10   consistency is above a predetermined threshold.

2.   A method as claimed in claim 1, wherein the determination of said candidate
sinusoid's phase consistency comprises the steps of:
-          segmenting a second segment of said audio signal into at least a first and a
15   second part;
-          determining the actual phases of said candidate sinusoid in at least the first and
the second part;
-          using the actual phase in the first part to serve as the input for predicting the
actual phase in the second part; and
20   -   determining said candidate sinusoid's phase consistency based on a prediction
error between the actual phase and the predicted phase in the second part.

3.   A method as claimed in claim 1, wherein the method further comprises a
further selection out of the selected sinusoids which comprises the steps of:
25   -   defining for at least one of the selected sinusoids a local frequency band
around said selected sinusoid's frequency;
-          combining amplitudes of frequency components within said local frequency
band from which at least one of the selected sinusoids within said local frequency band is
excluded; and

-              further selecting said selected sinusoid as a further selected sinusoid in
dependence on the combination of amplitudes.

4.   A method as claimed in claim 3, wherein a bandwidth of said local frequency
band around said selected sinusoid's frequency is defined in dependence on said selected
sinusoid's frequency.

5.   A method as claimed in claim 4, wherein said dependence on said selected
sinusoid's frequency is based on a human's perception of audio.

6.   A method as claimed in claim 3, wherein said selected sinusoid is further
selected as a further selected sinusoid when its amplitude is significant with regard to said
combination of amplitudes, which significance is evaluated by thresholding a difference
between said selected sinusoid's amplitude and a weighted mean amplitude of frequency
components within said selected sinusoid's local frequency band from which at least one of
the selected sinusoids within said local frequency band is excluded.

7.   A method as claimed in claim 3, wherein said selected sinusoid is further
selected as a further selected sinusoid when its amplitude is significant with regard to said
combination of amplitudes, which significance is evaluated by thresholding a ratio of:
-              a difference between said selected sinusoid's amplitude and a weighted mean
amplitude of frequency components within said selected sinusoid's local frequency band
from which at least one of the selected sinusoids within said local frequency band is
excluded; and
-              a weighted deviation of the amplitudes of frequency components within said
local frequency band from which at least one of the selected sinusoids within said local
frequency band is excluded.

8.   An audio encoder for encoding an audio signal by representing at least part of
said audio signal by a plurality of sinusoids, the audio encoder comprising:
-              means for performing an analysis on a first segment of said audio signal;
-              means for selecting candidate sinusoids based on said analysis;
-              means for determining for at least one of the candidate sinusoids a phase
consistency defined by an extent to which a phase of said candidate sinusoid at a certain

moment in time can be predicted from a phase of said candidate sinusoid determined at another moment in time; and

- means for selecting said candidate sinusoid as a selected sinusoid when its phase consistency is above a predetermined threshold.

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9.   An audio encoder as claimed in claim 8, wherein the audio encoder is further conceived to perform a further selection out of the selected sinusoids for which further selection the audio encoder further comprises:

- means for defining for at least one of the selected sinusoids a local frequency
10   band around said selected sinusoid's frequency;

- means for combining amplitudes of frequency components within said local frequency band from which at least one of the selected sinusoids within said local frequency band is excluded; and

- means for further selecting said selected sinusoid as a further selected sinusoid
15   in dependence on the combination of amplitudes.

10.   Audio system comprising means for obtaining an audio signal, an audio encoder as claimed in claim 8 or 9 for encoding said audio signal to obtain an encoded audio signal, and a formatting unit for formatting the encoded audio signal into a format suitable for
20   storage and/or transmission.